

**GOVERNMENT OF INDIA
DEFENCE
LOK SABHA**

UNSTARRED QUESTION NO:5523
ANSWERED ON:07.04.2017
Supply of High-Nitrogen Steel
Senguttuvan Shri Balasubramaniam

Will the Minister of DEFENCE be pleased to state:

(a) whether the Government has approved of any private sector steel company to enter into a pact with Defence Research and Development Organisation to manufacture and supply High-Nitrogen Steel (HNS) in order to replace the import of rolled homogenous armour for the sake of cost efficiency;

(b) if so, the details thereof;

(c) whether such an armour application of HNS is part of the 'Make in India' initiative and if so, the details thereof; and

(d) whether the HNS has the potential for use in all armour applications to be used in Infantry Combat Vehicle (ICV), Light Specialty Vehicle (LSV), Light Armoured Multi-purpose Vehicle (LAMV), Futuristic Infantry Combat Vehicle (FICV), Main Battle Tank (MBT), Future Ready Combat Vehicle (FRCV), aviation and naval systems etc. and if so, the details thereof?

Answer

MINISTER OF DEFENCE (SHRI ARUN JAITLEY)

(a) & (b): The Technology of processing Nickel Free High-Nitrogen Steel (HNS) has been developed by Defence Research and Development Organisation (DRDO). HNS has been found to have potential for use in armour applications. Non-exclusive Transfer of Technology (ToT) has been given to M/s Jindal Stainless Hisar Limited, a private industry, on 1st March, 2017. This being a non-exclusive ToT, the technology can also be transferred to any other private or public industry, interested in absorbing this technology. However, the ToT does not involve a supply agreement.

(c) The development of HNS was initiated as a basic Research & Development (R&D) and the technology fits to the policy of 'Make in India' initiative.

(d) Yes, Madam. HNS has potential for use in all armour applications. However, for material to be qualified and used in a specific combat vehicle application, it has to undergo many types of tests by the designers of the vehicle, including ballistic testing against specific ammunitions. The qualification of any material for its introduction into any armoured application is a long process and HNS has not yet been qualified for use in these applications.
